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10/689,172

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Duane A. Lunsford

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3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DUANE A. LUNSFORD and JIMMIE RAE BARAN, JR.

Appeal 2009-009374
Application 10/689,172
Technology Center 1700

Decided: November 13, 2009

Before EDWARD C. KIMLIN, CHARLES F. WARREN, and
PETER F. KRATZ, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-11 and 29-37. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants acknowledge the existence of numerous known methods for forming an adhesive article that include treating a substrate surface to increase adherence of adhesive thereto, such as a method that includes interposing an adhesion promoting primer layer (Spec. 1). Also, Appellants identify several conventional adhesives, such as silicone pressure sensitive adhesives, that do not include greater than three weight percent acrylic acid repeat units (Spec. 1, 10, and 11).

Appellants' claimed invention is directed to such an adhesive article including a substrate, a primer and an adhesive, as well as a method for preparing the article. Appellants' article includes a primer layer that consists essentially of nanoparticles, which layer is interposed between an adhesive layer and a substrate surface.¹

Claim 1 is illustrative and reproduced below:

An adhesive article comprising:

- (a) a first substrate comprising a first major surface;
- (b) a first adhesive layer, wherein the first adhesive layer comprises no more than 3% by weight acrylic acid repeat units; and
- (c) a first primer layer interposed between at least a portion of the first major surface of the substrate and at least a portion of the first adhesive layer, wherein the first primer consists essentially of nanoparticles.

¹ Appellants employ the term "consists essentially of" to mean "free of an effective amount of a component that reacts with the adhesive or the substrate (i.e., ambifunctional silane), and/or any polymeric binders that act to increase the adhesion of the adhesive to the substrate" (Spec. 11).

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Lange	US 4,816,333	Mar. 28, 1989
Melancon	US 2003/0152768 A1	Aug. 14, 2003

Appellants furnish a Declaration of Robert G. Murray and a copy of published European Patent Specification No. 0 372 756 (Strobel) as further evidence to be weighed in considering the obviousness question before us.

The Examiner maintains the following grounds of rejection:

Claims 1-11 and 29-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lange, taken alone, or with respect to claims 6 and 32, further in view of Melancon.

We affirm.

Appellants argue the rejected claims as a group and do not present reasonably specific arguments directed to the separate patentability of any of the appealed claims (*see generally* App. Br.).² The Examiner refers to the additional teachings of Melancon in rejecting dependent claims 6 and 32; however, Appellants do not disagree with the Examiner's application of Melancon to the latter claims for showing that silicon polyurea based adhesives are known (App. Br. 9). Thus, while dependent claims 6 and 32 are briefly discussed under a separate argument heading; no arguments directed to the separate patentability of these claims and/or the Examiner's application of the additional teachings of Melancon thereto are furnished

² We refer to the Amended Brief on Appeal filed June 05, 2007 as the Appeal Brief (App. Br.). Our references to the Reply Brief (Reply Br.) herein are to the Reply Brief to the Supplemental Examiner's Answer Under 37 C.F.R. § 41.43(b) filed September 17, 2007.

(App. Br. 6-9). Accordingly, we select claim 1 as a representative claim on which we focus in deciding this appeal.

Appellants do not dispute the Examiner's determination that Lange discloses a substrate having a surface coated with a layer of nano-size silica particles (see generally App. Br.; Ans. 3; Lange col. 3, ll. 20-24).

The Examiner has determined that Lange "is totally silent with respect to the presence of ambifunctional silanes" and that Strobel (EP '756) does not refer to Lange (Supp Ans. 3). Appellants do not specifically contest these determinations by the Examiner (*see generally* Reply Br.)

In discussing the disclosed silica coating's adherence to a substrate, Lange describes a test performed with a strip of Scotch Brand Magic transparent tape (available from 3M Company) being applied to and stripped from the coated substrate (col. 3, l. 60–col. 4, l. 4).

Lange teaches that "[t]he excellent adhesion of the coating to the substrate and the adhesive of the test tape also demonstrates the utility of the coating as a primer for adhering adhesives to substrates, such as polymeric substrates, e.g., polyester films" (col. 4, ll. 5-9).

Based on the aforementioned teachings of Lange and the additional teachings as referred to by the Examiner in the Answer, the Examiner, in essence, maintains that Lange would have reasonably led one of ordinary skill in the art to an article including a substrate, a nano-particle primer layer and an adhesive layer, including a workable prior art adhesive, that falls within the scope of representative claim 1 (Ans. 3-5).

Appellants' arguments opposing the Examiner's stated obviousness rejections rely on the Declaration of Robert G. Murray (Decl., Item No. 4) for establishing that "[f]rom at least 1969 until the present, the adhesive used

with 3M's Scotch Brand Magic transparent tape contained greater than 3% by weight acrylic acid". In addition, Appellants rely on a European Patent (EP) Publication EP 0 372 756), as evidence, in support of a "teaching away" argument (Br. 7-9). The EP Publication (EP '756) was previously utilized by the Examiner in rejecting Appellants' claims. *See* Final Office Action (FOA 2-3).

Appellants essentially assert that Lange, at best, may have sparked the interest of a scientist or an ordinarily skilled artisan to try forming articles with adhesive layers over a nano-primed substrate using an adhesive other than the exemplified Scotch Brand Magic transparent tape adhesive, but Lange would not have led one of ordinary skill in the art to an article including a nano-particle primer and an adhesive layer, as claimed (App. Br. 6-7). Also, Appellants urge that the prior art as a whole would have directed one of ordinary skill in the art toward an article that would have included ambifunctional silane in the nano-particle containing primer layer, as taught by Strobel (App. Br. 7-8). According to Appellants, the inclusion of ambifunctional silane is excluded from the scope of representative claim 1 given the "consists essentially of" language and the restrictive meaning thereof set forth by Appellants in the Specification (App. Br. 8).

Accordingly, it is Appellants' view that one of ordinary skill in the art would not have been directed to the claimed subject matter based on the prior art teachings of record with a reasonable expectation of success but rather toward the use of a silane-containing nano-particle primer layer as taught by Strobel (App. Br. 9).

The issues before us are: have Appellants established reversible error in the Examiner's obviousness rejections based on the aforementioned (1)

obvious to try argument; (2) teaching away contention; and/or (3) lack of a reasonable expectation of success assertion?

DISCUSSION/CONCLUSION

We answer these questions in the negative and we affirm the Examiner's rejections.

At the outset, we note our agreement with Appellants' position that the Examiner has not effectively refuted the factual assertion of Roger G. Murray (Declaration under 37 C.F.R. § 1.132) concerning the acrylic acid content of 3 M's Scotch Brand Magic transparent tape (Decl., Item no. 4; Reply Br. 5; Supp. Ans. 4; Ans. 3-4). However, as correctly noted and suggested by the Examiner, one of ordinary skill in the art would not have considered Lange's teaching of an article with a nano-particle primer and an adhesive layer to be limited to the use of an adhesive layer that can only include adhesive corresponding to the tape adhesive of Lange's Examples (Ans. 3-5; Supp. Ans. 4)). Thus, the Examiner's failure to credit the Declaration evidence does not rise to reversible error. In this regard, Lange used 3 M's Scotch Brand Magic transparent tape to test the adherence of a nano-particle primer layer to a substrate in Examples 1 and 2, not to limit the type of adhesives that the primer coating layer can bind to a substrate via the interposition of the primer between the substrate and an adhesive layer (col. 4, ll. 5-9, col. 6, l. 18- col. 7, l. 33).

Appellants have not persuasively articulated why one of ordinary skill in the art would have found Lange's teachings insufficient to select a conventional adhesive other than an adhesive having more than 3 weight percent acrylic acid repeat units, the only type of adhesive argued to be

excluded by representative claim 1.³ In an obviousness assessment, skill is presumed on the part of the artisan, rather than the lack thereof. *In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985).

Moreover, Appellants' contentions with respect to Strobel teaching away from the claimed subject matter by requiring an ambifunctional silane in a primer layer misses the mark because Appellants' representative claim 1 does not require a particular adhesive strength or adhesive failure mode, as addressed by Strobel (Strobel, p. 6, l. 55 – p. 7, l. 2). Also, Lange does not require an ambifunctional silane additive for the nano-particle layer (*see generally* Lange). While we agree with Appellants that the additional teachings of Strobel, as supplied by Appellants with the Appeal Brief, must be considered in assessing the obviousness of the claimed subject matter over the applied prior art, Appellants have the burden to persuasively explain how the use of ambifunctional silane in a nano-particle primer layer, as argued to be required by Strobel, would have dissuaded one of ordinary skill in the art from following the alternative option suggested by Lange; that is, forming a nano-particle priming layer for conventional adhesives that does not include ambifunctional silane (Lange; col. 4, ll. 5-9). Here, Appellants have not done so by referring to Examples 1-4 and several passages of Strobel (App. Br. 8).

In particular, Appellants do not contest the Examiner's determinations that Lange "is totally silent with respect to the presence of ambifunctional silanes" and that Strobel (EP '756) does not refer to Lange (Supp Ans. 3;

³ On appeal to this Board, Appellants must show that the Examiner erred in rejecting the claims. *Cf. In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006); *see also* 37 C.F.R. § 41.37(c)(1)(vii).

see generally Reply Br.). After all, “[t]he prior art’s mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed in the . . . application.”

Moreover, Appellants’ partial syllogism and “hasty generalization” fallacy argument set forth in the reply Brief is not persuasive. This is because the Examiner’s rejection is not premised solely on Lange’s Examples, as the partial syllogism erroneously hints at being the case; but also on the additional disclosure of Lange suggesting that the primer would be reasonably expected to work for other adhesives, as discussed above and in the Examiner’s Answer (Reply Br. 4; Ans. 3-4).

Further concerning Appellants’ obvious to try and lack of reasonable expectation of success assertions, we note that the Supreme Court has instructed that although the teaching, suggestion, and motivation test “captured a helpful insight,” an obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). In this regard, Appellants have not demonstrated that arrival at the claimed subject matter would have been unexpected to one of ordinary skill in the art and/or would have required “more than the predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417.

On this record, we are not persuaded of reversible error in the Examiner’s obviousness determinations.

Appeal 2009-009374
Application 10/689,172

ORDER

The Examiner's decision to reject the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

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3M INNOVATIVE PROPERTIES COMPANY
P.O. BOX 33427
ST. PAUL, MN 55133-3427